

## **REMARKS**

### **1. The Amendments, the Support Therefor, and Basis for Entry**

No claims have been canceled, four new claims (39-42) have been added, and claims 28, 29, and 37 have been amended to leave claims 1, 8, 9, 15, 17, 18, 20, and 27-42 in the application. No new matter has been added by the amendments or new claims, wherein:

- Claims 28, 29, and 37 are amended to address §112 issues, as discussed below at Section 4 of this Response,
- New claims 39 and 40 find support in (for example) FIGS. 6-8, and
- New claims 41 and 42 find support in (for example) page 12 line 1 onward and FIGS. 8-9 (particularly FIG. 9).

The new claims are discussed at further length below at Section 7 of this Response.

### **2. Amendments to Specification**

Please note that the Preliminary Amendment filed August 25, 2006 included several amendments to the written description of the application. It is unclear whether the Office has entered these amendments. Kindly confirm.

### **3. Sections 2-3 of the Office Action: Rejection of Claim 38 under 35 USC §112(1)**

Kindly withdraw this rejection since the specification contains clear support for the claimed structure at page 12 line 1 onward (discussing FIGS. 5 and 8). Note particularly lines 8-11 in conjunction with FIGS. 5 and 8:

Each bus-bar has become extended by an array of fully conductive yarns, such that its conductive path becomes comb-like in shape. The two comb-shaped bus-bars 50 are staggered within the textile, such that the fingers of the combs become interlaced, but maintain electrical isolation from one another.

It is also noted that claim 38, for which no §112(1) issues have been raised, encompasses much the same matter as claim 29.

**4. Sections 4-5 of the Office Action: Rejection of Claims 28, 29, and 37 under 35 USC §112(2)**

Kindly withdraw these rejections. The scope of these claims was clear when these were read in light of the specification, particularly page 11 lines 15-16 and page 12 lines 1-11. See, e.g., MPEP 2173.02 (“Definiteness of claim language must be analyzed, not in a vacuum, but in light of . . . [t]he content of the particular application disclosure . . . .”); *Howmedica Osteonics Corp. v. Tranquil Prospects Ltd.*, 74 USPQ2d 1680, 1683 (Fed. Cir. 2005) (“[t]he definiteness of a patent claim depends on whether one skilled in the art would understand the bounds of the claim when read in light of the specification”). The claims have nonetheless been amended to further enhance definiteness, and since one reviewing the specification (particularly the aforementioned passages) would clearly understand their bounds, the claims comply with §112(2).

**5. Sections 6-7 of the Office Action: Rejection of Claims 1, 8, 9, 17, 18, 20, 28-32, 34, 35, and 37 under 35 USC §102 or §103 in view of US Publn. 2003/0119391 to Swallow et al.**

These rejections should be withdrawn. Initially looking to Section 9 of the Office Action, wherein the Office addresses comments in the prior Response:

Applicants argue that it should be apparent that one of ordinary skill in the art at the time the invention was made, who knew of Swallow but not of the claimed invention, would never contemplate the claimed invention in view of Swallow, since the entire purpose of Swallow is to provide a fabric whose electrical properties vary with pressure/flexure, and that it cannot be fairly said that one would contemplate an element with fixed geometry/resistance as claimed. Examiner respectfully disagrees. It should be noted that a fixed geometry/resistance is not claimed, as only a desired geometry or a chosen linear resistivity is claimed. Therefore, Applicants' arguments directed to differences based on fixed geometry/resistance characteristics between the invention of the prior art and the claimed invention are not commensurate in scope with the claimed invention.

This is incorrect insofar as a fixed geometry is claimed; note claim 1's recitation of:

wherein the fabric includes at least one instance of a crossover point at which the first and second electrically conductive filaments or fibres are permanently biased apart and at least one instance of a crossover point at which said corresponding first and second electrical conductors are permanently physically connected together, wherein said one or more crossover points at which said corresponding first and second electrically conductive filaments or fibres are permanently physically connected together are effected by means of a plain weave structure local to that crossover point, wherein said permanently connected crossover points and said permanently biased apart crossover points bring into being at least one conductive path within said fabric that is composed of two or more contiguous segments of two or more electrically conductive filaments or fibres;

Similarly, note claim 30's recitation of:

wherein the fabric includes:

- A. one or more crossover points at which the first and second electrically conductive elements are permanently biased apart, the permanent biasing being effected by warp and/or weft floats of the first and/or second electrically conductive elements over or under more than one of the elongated insulating elements, and
- B. one or more crossover points at which the first and second electrically conductive elements are permanently in conductive communication, the permanent conductive communication being effected by a plain weave in the warp and weft at the crossover point,

Section 7 of the Office Action alleges that these features – and indeed all claimed features – are shown in the “entire document including paragraphs 0001-0020, 0035-0043, 0060-0073, 0076-0092, claims 1-16, Figures 1-12.” However, where are the aforementioned features actually shown or suggested in Swallow? The Office has the burden of establishing a *prima facie* case of anticipation or obviousness, including a particular indication of where claimed features are believed to be present in the prior art, and this has not been done. See 37 CFR §1.104(c)(2);<sup>1</sup>

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<sup>1</sup> “In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. *When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.*” (Emphasis added)

MPEP 2141;<sup>2</sup> *Ex parte Levy*, 17 USPQ2d 1461, 1462 (Bd. Pat. App. & Int. 1990).<sup>3</sup> Here the Office Action's rejections simply repeat the recitations of the claims, followed by citations to huge portions of the cited prior art. This is not compliant with 37 CFR §1.104(c)(2) – it does not designate “the particular part relied on . . . as nearly as practicable,” nor is “the pertinence of each reference . . . clearly explained” – and no prima facie case of anticipation or obviousness is made out. In short, it is simply not understood where the Office Action believes the aforementioned features to be present in *Swallow*. If the rejections are maintained, and/or if further rejections are posed in future Actions, the Office is respectfully requested to comply with the aforementioned rules and cases, and provide a specific indication – e.g., by column / line number, and/or by Figure and reference numeral – where the claimed features are believed to be present in the prior art. An “omnibus” rejection which simply reproduces the claims and then cites “see entire document”, and/or otherwise cites huge portions of the application, is simply not helpful. More bluntly, the results of this approach are often not understood, insofar as it is not clear how the cited portions of the application are truly relevant to the claim language.

To review, the entire purpose of US Publn. 2003/0119391 to *Swallow et al.* is to provide a fabric / circuit whose electrical properties vary with pressure/flexure; see, e.g., the Abstract. This can be achieved by weaving the fabric / circuit so that conductors are normally spaced apart, but flex into conductive communication when subjected to pressure. Note that contrary to comments in the Office Action, the *Swallow et al.* fabrics are not focused on use as heating elements. Rather, these are primarily intended for use as sensing elements: the fabric can in effect be formed as a switch, or as an array of switches, with the fabric's electrical properties

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<sup>2</sup> At section entitled "Reconsider All Evidence And Clearly Communicate Findings And Conclusions": “Office personnel *must articulate findings of fact that support the rationale relied upon in an obviousness rejection*. . . . The Office action should clearly communicate the Office's findings and conclusions, articulating how the conclusions are supported by the findings.” (Emphasis added.)

<sup>3</sup> “The factual determination of anticipation requires the disclosure in a single reference of every element of the claimed invention. . . . It is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference.” (*citing to Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984)).

varying in dependence on the area of the fabric being compressed. In contrast, the present application describes fabrics / circuits wherein certain crossing conductors are permanently spaced, or alternatively permanently connected, to achieve desired electrical properties. See, e.g., FIG. 7, showing (schematically) the weave of a fabric / circuit forming a spiral conductive path (with the spiral path being drawn in below in dashed lines for more rapid understanding):

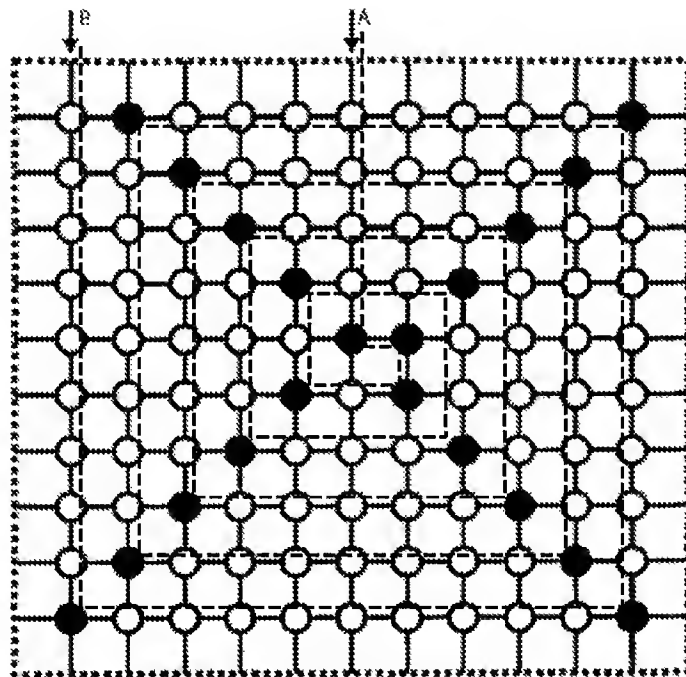


FIGURE 7

As noted above, the Office Action does not state (or at least does not provide a statement of sufficient detail to be understandable) where US Publn. 2003/0119391 to *Swallow et al.* shows or suggests such matter. Further, since US Publn. 2003/0119391 to *Swallow et al.* is directed to circuits / fabrics with changeable geometry and electrical properties (depending on where and how much pressure is exerted on the circuits / fabrics), whereas features of the claimed invention have fixed geometry / properties, it cannot fairly be said that one of ordinary skill at the time the invention was made, who knew of *Swallow et al.* but not of the claimed invention, would contemplate the claimed invention in view of *Swallow et al.* See MPEP 2143.01 (subsection entitled “The Proposed Modification Cannot Change the Principle of Operation of

a Reference”). Independent claims 1 and 30, and therefore all claims, are therefore submitted to be allowable.

Regarding the rejections of claims 28, 29, 37, and 38, regardless of how broadly these claims are interpreted, the recited matter is simply not seen to be present in US Publn. 2003/0119391 to *Swallow et al.*, either at the cited portions of *Swallow et al.* or elsewhere. If these rejections are maintained, kindly provide sufficient detail that we can understand where the Office believes the recited features to be present.

**6. Section 8 of the Office Action: Rejection of Claims 15, 18, 20, 33, and 35 under 35 USC §103 in view of US Publn. 2003/0119391 to *Swallow* and US 6,333,736 to *Sandbach***

These claims are allowable for at least the same reasons as claims 1 and 30, from which these claims depend.

**7. New Claims 39-42**

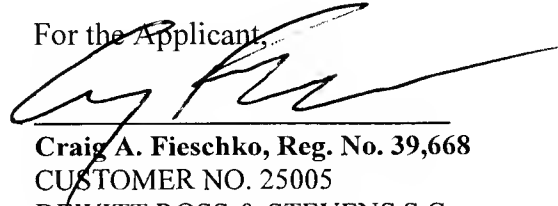
New claims 39-42 are allowable for at least the same reasons as claims 1 and 30, from which these claims depend. In addition:

- Claims 39 and 40 are submitted to be allowable for at least the reasons discussed in Section 5 above: no ordinary artisan would contemplate modification of US Publn. 2003/0119391 to *Swallow et al.* to generate a circuit / fabric lacking “switchable” conductive connections, and including only permanent conducting and non-conducting connections. Such matter is wholly contrary to the purposes of *Swallow et al.* Again see MPEP 2143.01, subsection entitled “The Proposed Modification Cannot Change the Principle of Operation of a Reference”.
- Claims 41 and 42 are submitted to be allowable because no ordinary artisan would contemplate the claimed arrangements in view of the art of record, in particular because there is no apparent use for, or benefit to, the claimed “massively parallel” structures.

**8. In Closing**

If any questions regarding the application arise, please contact the undersigned attorney. Telephone calls related to this application are welcomed and encouraged. The Commissioner is authorized to charge any fees or credit any overpayments relating to this application to deposit account number 18-2055.

For the Applicant,

A handwritten signature in black ink, appearing to read 'Craig A. Fieschko', written over a horizontal line.

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